

**CLAIMS**

1. A method of relocking a vehicle (2) equipped with a hands-free access system comprising a badge (4) and means of communication by electromagnetic signals between the vehicle (2) and the badge (4) making it possible to locate the badge (4) with respect to the vehicle, the hands-free access system making it possible to operate a locking of the doors when the last door of the vehicle (2) is closed and when the badge (4) exits a first zone (Z1) delimited around the vehicle, characterized in that a second zone (Z2), more extensive than the first zone (Z1), is delimited around the vehicle and in that a relocking is commanded when, after a locking of the doors commanded by the hands-free system, a door is opened without action of the hands-free system and then closed again, uniquely insofar as a badge (4) is located within the second zone (Z2).

2. The relocking method as claimed in claim 1, characterized in that the first zone (Z1) corresponds to the zone around the vehicle in which the badge (4) receives the signals transmitted by the vehicle (2).

3. The relocking method as claimed in one of claims 1 or 2, characterized in that the second zone (Z2) is defined as being all of the points in space around the vehicle from which a signal transmitted by the badge (4) is received by the vehicle.

4. The relocking method as claimed in one of claims 1 to 3, characterized in that in order to locate the badge (4) in the second zone (Z2), the badge (4) transmits a recurrent message over a predetermined time period after the last response given to a location interrogation transmitted by the vehicle (2).

5. The relocking method as claimed in one of claims 1 to 3, characterized in that, in order to locate the badge (4) in the second zone (Z2), the vehicle (2) transmits, after detection by the vehicle

of the closing of the last door of the vehicle (2), a signal toward the badge containing a request asking the badge (4) to transmit a recurrent message over a predetermined time period, the badge (4) then being  
5 located in the second zone (Z2) insofar as this message is received by the vehicle (2).

6. The relocking method as claimed in one of claims 1 to 3, characterized in that, in order to locate the badge in the second zone (Z2), the vehicle  
10 (2) transmits a signal of the same type as those transmitted by the badge (4) and in that the badge (4) is located in the second zone (Z2) if it responds to the signal received by the vehicle (2).

7. A method of locking a vehicle (2) equipped with  
15 a hands-free access system comprising a badge (4) and means of communication by electromagnetic signals between the vehicle (2) and the badge (4) making it possible to locate the badge (4) with respect to the vehicle (2), the hands-free access system making it  
20 possible to operate a locking of the doors when the last door of the vehicle is shut and the badge (4) exits a first zone (Z1) delimited around the vehicle (2), characterized in that in the case in which an obstacle prevents the locking of the doors of the  
25 vehicle (2) when the badge (4) exits the first zone (Z1), a second zone (Z2), more extensive than the first zone (Z1), is delimited around the vehicle (2), and in that a locking is commanded after the prevention stops, uniquely insofar as a badge (4) is located in the  
30 second zone (Z2).